

Figure 1

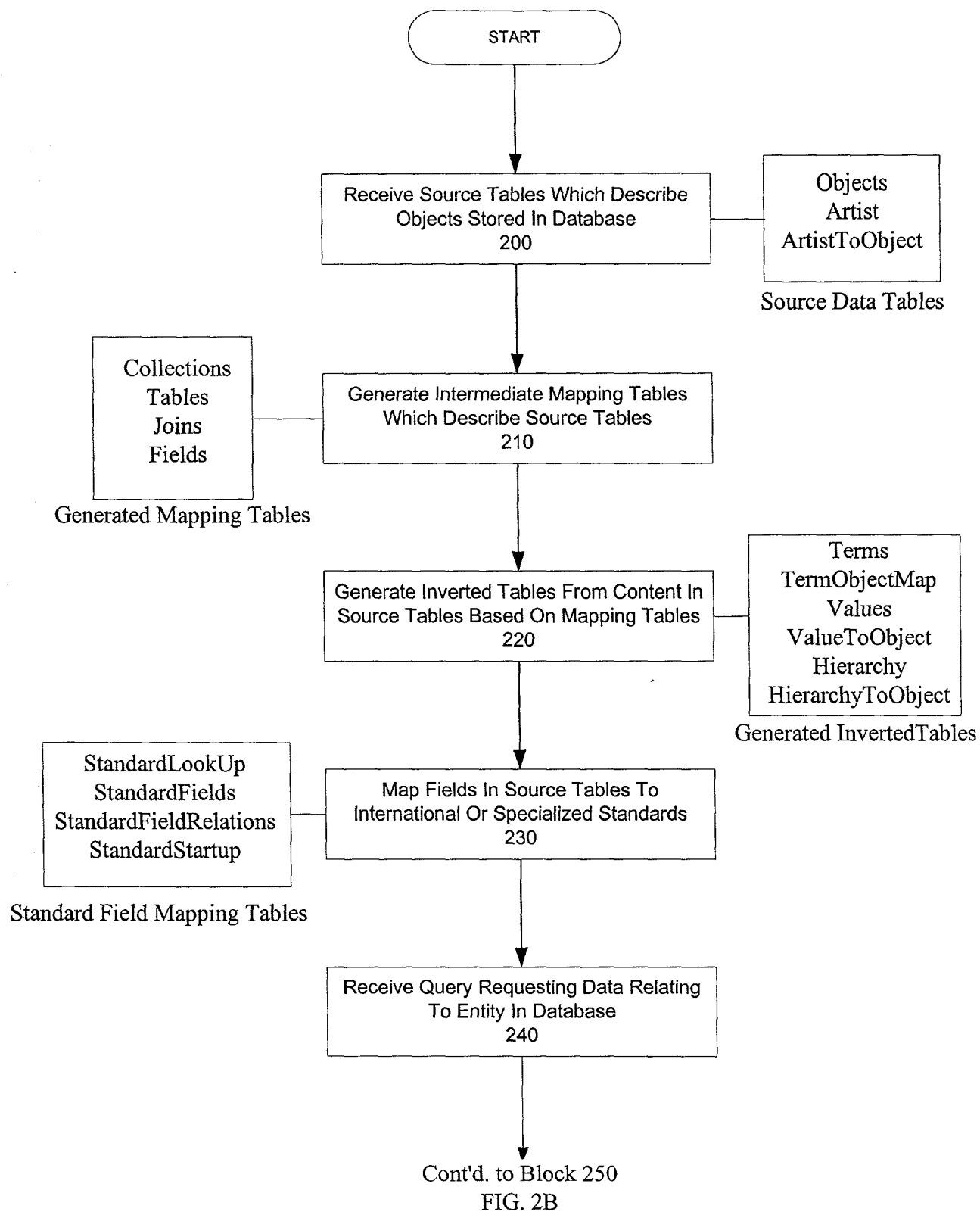


FIG. 2A

Cont'd. from Block 240  
FIG. 2A

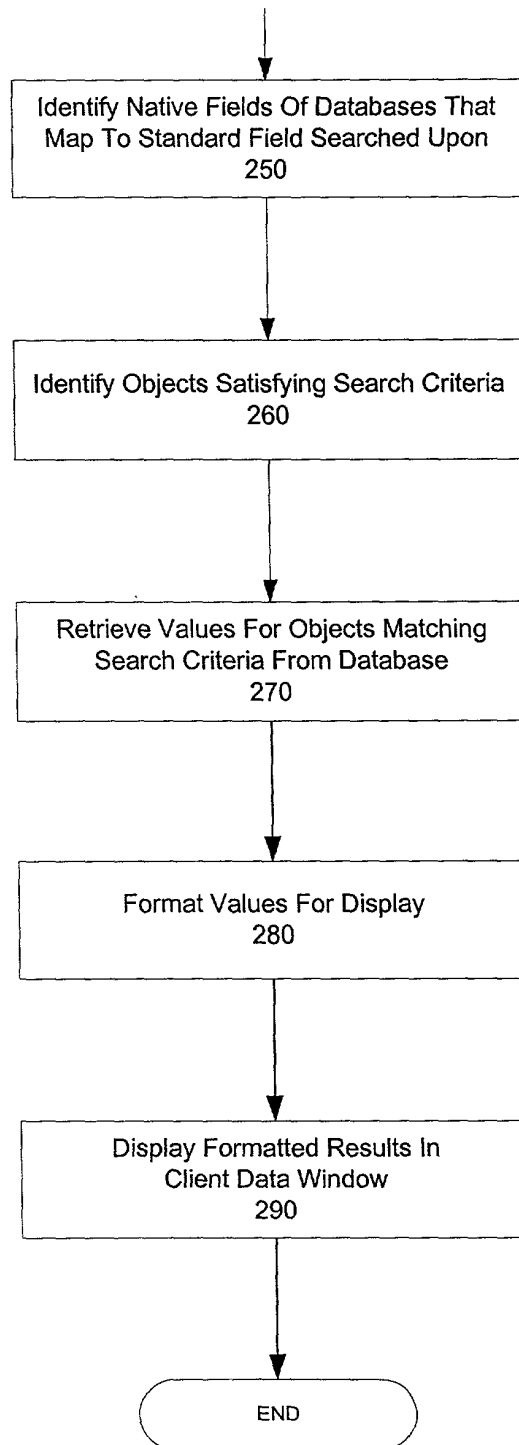


FIG. 2B

Objects Table

300	302	304	306	308
ObjectID	Title	Year	Status	
1	Kleine Welten VII	1922	1	
2	Parallel Diagonals	1923	1	
3	Landscape with Church	1913	2	
4	Mort d'Hamlet	1843	2	
5	Arabes D'Oran	1833	1	

Status Table

310	312	314
StatusID	Status	
1	Restricted Use	
2	Academic Use Only	

FIG. 3

Artists Table

400

402

404

406

ArtistID	ArtistName	DateOfBirth
1	Kandinsky, Vasily	1866
2	Delacroix, Eugène	1798

ArtistsToObject Table

410

412

414

416

ArtistID	ObjectID	Preferred
1	1	Y
1	2	Y
1	3	Y
2	1	N
2	3	N
2	4	Y
2	5	Y

FIG. 4

Locations Table

500

502

504

LocationID	LocationName
1	U.S.
2	California
3	Nevada
4	San Francisco
5	Los Angeles
6	Reno
7	Las Vegas
8	Hawaii
9	Pacific Ocean

LocationParentChild Table

510

512

514

516

ParentID	ChildID	Preferred
1	2	Y
1	3	Y
1	8	N
2	4	Y
2	5	Y
3	6	Y
3	7	Y
9	8	Y

FIG. 5

602

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606

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Events Table

600

EventID	LocationID	FromDate	ToDate	Description
1	2	June 1880	June 1890	Exhibited...
2	3	June 1890	June 1900	Exhibited...
3	4	June 1900	June 1910	Owned by...
4	8	June 1910	June 1910	Owned by...

610

612

EventID	ObjectID
1	1
2	1
3	1
3	2
4	3
4	4
4	5

EventsObjects Table

610

622

624

626

People Table

620

PeopleID	Name	DOB
1	Mullen, Margaret	1857
2	Karrer, Anthony	1865
3	Hauer, Bradford	1872

632

634

Person	Project
1	1
1	2
2	1
3	2

ProjectMember Table

630

642

644

ProjectID	Name
1	Residence for Eugene Rayford
2	Marden Opera House Restoration

Projects Table

640

652

654

ProjectID	ObjectID
1	1
1	2
1	5
2	3
2	4
2	5

ProjectsAndObjects Table

650

FIG. 6

ISCollections  
Mapping Table  
700

702

704

706

CollectionID	Name	OriginalDataSource
1	The Dalton Museum	DSN:c:\asdf\asdfa

ISTables  
Mapping Table  
710

712

714

716

717

718

TableID	CollectionID	TableName	Hierarchy	ParentChild
1	1	Objects	0	0
2	1	Projects	0	0
3	1	People	0	0
4	1	ProjectMember	0	0
5	1	ProjectToObject	0	0
6	1	Artists	0	0
7	1	ArtistToObject	0	0
8	1	Locations	1	1
9	1	Status	0	0
10	1	LocationParentChild	0	0
11	1	LocationFlattened	0	0
12	1	Events	0	0
13	1	EventToObject	0	0

FIG. 7



IRFields  
Mapping Table  
800

801	802	803	804	805	806
FieldID	FieldGroupID	Display Name	FieldType	FieldName	TableID
1	1	Title	1	Title	1
2	2	Year	2	Year	1
3	3	Status	1	Status	9
4	4	Project Member DOB	1	DateOfBirth	6
5	5	Project Name	1	Name	2
6	6	Artist Name	1	ArtistName	6
7	6	Artist Year of Birth	2	DateOfBirth	6
8	8	Location	1	LocationNam	8
9	8	Date	2	Date	12
10	8	Description	1	Description	12

Cont'd

807	808	809	810
Display Order	DataField Searchable	Keyword Searchable	Displayed In Data
1	1	1	1
2	1	1	1
3	1	1	1
4	1	1	1
5	1	1	1
6	1	1	1
7	1	1	1
8	1	1	1
9	1	1	1
10	0	1	1

FIG. 8

IRFieldGroups  
Mapping Table  
820

822	824	826	828	829
FieldGroupID	CollectionID	DisplayName	FieldType	JoinPath
1	1	Title	1	0
2	1	Year	1	0
3	1	Status	1	10
4	1	Project Member	1	1
5	1	Project Name	1	3
6	1	Artist	2	5
8	1	Events	2	7

IS Joins  
Mapping Table  
900

902	904	906	907	908	909
JoinID	StartTableID	StartFieldName	EndTableID	EndFieldName	NextJoin
1	3	PeopleID	4	Person	2
2	4	Project	2	ProjectID	3
3	2	ProjectID	5	ProjectID	4
4	5	ObjectID	1	ObjectID	0
5	6	AristID	7	ArtistID	6
6	7	ObjectID	1	ObjectID	0
7	8	LocationID	12	LocationID	8
8	12	LocationID	13	LocationID	9
9	13	ObjectID	1	ObjectID	0
10	9	StatusID	1	Status	0

FIG. 9

Composite of ISTables, IRFields, and IRFieldGroups  
1000

1002	1004	1006	1007	1008	1009
FieldGroup	DisplayName	FieldID	FieldName	TableName	JoinPath
1	Title	1	Title	Objects	0
2	Year	2	Year	Objects	0
3	Status	3	Status	Status	10
4	Project Member DOB	4	YearOfBirth	Artists	1
5	Project Name	5	Name	Projects	3
6	Artist	6	ArtistName	Artists	5
6	Artist	7	YearOfBirth	Artists	5
8	Events	8	LocationName	Locations	7
8	Events	9	Date	Events	7
8	Events	10	Description	Events	7

FIG. 10

# ISJoins Table Joined With ISTables Table

1100

1102	1104	1106	1107	1108	1109
JoinID	TableName	StartFieldName	Tables_1.TableName	EndFieldName	NextJoin
1	People	PeopleID	ProjectMember	Person	2
2	ProjectMember	Project	Projects	ProjectID	3
3	Projects	ProjectID	ProjectToObject	ProjectID	4
4	ProjectToObject	ObjectID	Objects	ObjectID	0
5	Artists	AristID	ArtistToObject	ArtistID	6
6	ArtistToObject	ObjectID	Objects	ObjectID	0
7	Locations	LocationID	Events	LocationID	8
8	Events	LocationID	EventToObject	LocationID	9
9	EventToObject	ObjectID	Objects	ObjectID	0
10	Status	StatusID	Objects	Status	0

1112

1114

1116

ArtistName	YearOfBirth	ObjectID
Kandinsky, Vasily	1866	1
Delacroix, Eugène	1798	1
Kandinsky, Vasily	1866	2
Kandinsky, Vasily	1866	3
Delacroix, Eugène	1798	3
Delacroix, Eugène	1798	4
Delacroix, Eugène	1798	5

Result Table From Second Join Example

1110

1132

1134

ObjectID	Name
1	Mullen, Margaret
2	Mullen, Margaret
5	Mullen, Margaret
1	Karrer, Anthony
2	Karrer, Anthony
5	Karrer, Anthony
3	Mullen, Margaret
4	Mullen, Margaret
5	Mullen, Margaret
3	Hauer, Bradford
4	Hauer, Bradford
5	Hauer, Bradford

1142

1144

1146

1148

LocationName	Date	Description	ObjectID
California	June 1880	Exhibited...	1
Nevada	June 1890	Exhibited...	1
San Francisco	June 1900	Owned by...	1
San Francisco	June 1900	Owned by...	2
Hawaii	June 1910	Owned by...	3
Hawaii	June 1910	Owned by...	4

Result Table From Fourth Join Example

1140

Result Table From Third Join Example

Involving Four Join Operations

1130

FIG. 11

1202	1204	1206
ArtistName	YearOfBirth	ObjectID
Kandinsky, Vasily	1866	1
Delacroix, Eugène	1798	1
Kandinsky, Vasily	1866	2
Kandinsky, Vasily	1866	3
Delacroix, Eugène	1798	3
Delacroix, Eugène	1798	4
Delacroix, Eugène	1798	5

Example Source Table  
1200

1212	1214	1216
TermID	Keyword	RefCount
1	kandinsky	1

DTTerms Table  
("kandinsky")  
1210

1222	1224	1226
TermID	ObjectID	FieldID
1	1	6

DTTermObjectMapTable  
("kandinsky")  
1220

1232	1234	1236
TermID	Keyword	RefCount
1	kandinsky	1
2	vasilly	1

DTTerms Table  
("kandinsky" and "vasilly")  
1230

1242	1244	1246
TermID	ObjectID	FieldID
1	1	6
2	1	6

DTTermObjectMap Table  
("kandinsky" and "vasilly")  
1240

1252	1254	1256
TermID	Term	RefCount
1	kandinsky	1
2	vasilly	1
3	delacroix	1
4	eugene	1

DTTerms Table  
(for all terms in source table)  
1250

1262	1264	1266
TermID	ObjectID	FieldID
1	1	6
2	1	6
3	1	6
4	1	6

DTTermObjectMap Table  
(for all terms in source table)  
1260

FIG. 12

1302	1304	1306
TermID	Term	RefCount
1	kandinsky	2
2	vasilly	1
3	delacroix	1
4	Eugene	1

DTTerms Table  
(for all terms in source table  
increase reference count)  
1300

1312	1314	1316
TermID	ObjectID	FieldID
1	1	6
2	1	6
3	1	6
1	2	6

DTTermObjectMap Table  
(for all terms in source table  
term associated with two objects)  
1310

1322
Term
a
the
an
of

ISStopList Table  
1320

FIG. 13

1402	1404	1406	1408
ValueID	ValueText	FieldID	RefCount
1	Kandinsky, Vasily	6	1
2	1866	7	1
3	Delacroix, Eugène	6	1
4	1798	7	1

DTValueText Table  
1400

1412	1414	1416	1418	1419
ValueID	ObjectID	DisplayOrder	Grouping	Preferred
1	1	0	0	1
2	1	0	0	1
3	1	0	0	1
4	1	0	0	1

DTValueText ObjectMapTable  
1410

1422	1424	1426	1428	1429
ValueID	ValueText	ValueNumber	FieldID	RefCount
1	Kandinsky, Vasily		6	1
3	Delacroix, Eugène		6	1

DTValueText Table  
1420

1432	1434	1436	1438	1439
ValueID	ValueText	ValueNumber	FieldID	RefCount
2		1866	7	1
4		1798	7	1

DTValueNumber Table  
1430

FIG. 14

1502	1504	1506	1507	1508	1509
StandardID	Standard_Type	StandardName	Version	Standards_Order	Enabled
0	3	CDWA	1.0	5	0
3	3	VRA	2.0	3	1
4	3	VRA v3.0	3.0	4	1
8	1	HFJ Museum	1.0	0	1

SLStandardsLookup Table 1500

1511	1512	1513	1514	1515
StandardID	StandardName	StandardFieldID	StandardFieldName	StandardFieldDisplayName
8	HFJ Museum	1	Artist	Artist
8	HFJ Museum	2	Artist_Dates	Artist Dates
8	HFJ Museum	3	Nationality	Nationality

cont.

1516	1517	1518	1519
StandardFieldType	LongString	StandardFieldDisplayOrder	StandardPickedField
1	2	1	1
1	2	2	0
1	2	3	0

SLStandardFields Table 1510

1522	1524	1526	1528	1529
StandardID	StandardName	StandardFieldID	MappingStandardName	MappingStandardFieldID
8	HFJ Museum	1	CDWA	102
8	HFJ Museum	2	CDWA	104
8	HFJ Museum	3	CDWA	111

SLFieldStandardRelation Table 1520

1531	1532	1533	1534	1535
StandardID	StandardName	CreateThumbCache	Thumbnail1FieldID	Thumbnail2FieldID
3	VRA	1	2	6
4	VRA v3.0	0	3	16

contd.

1536	1537	1538	1539	1540	1541
Thumbnail3FieldID	Thumbnail4FieldID	Sort1FieldID	Sort2FieldID	Sort4FieldID	Sort4FieldID
7	14	14			
21	40	40			

SLStandardStartup Table 1530

FIG. 15



1602

1604

Keyword	ObjectID
kandinsky	1
kandinsky	2
kandinsky	3

Result Table  
(Terms Search)  
1600

1612

1614

Value	ObjectID
Kandinsky, Vasily	1
Kandinsky, Vasily	2
Kandinsky, Vasily	3

Result Table  
(Values Search)  
1610

1622

1624

1626

1628

1629

FieldGroupID	FieldType	DisplayName	FieldID	Display Name
1	1	Title	1	Title
2	1	Year	2	Year
3	1	Status	3	Status
4	1	Project Member	4	Project Member
5	1	Project Name	5	Project Name
6	2	Artist	6	Artist Name
6	2	Artist	7	Artist Year of
8	2	Events	8	Location
8	2	Events	9	Date
8	2	Events	10	Description

Field and FieldGroup Table  
1620

1632

1634

1636

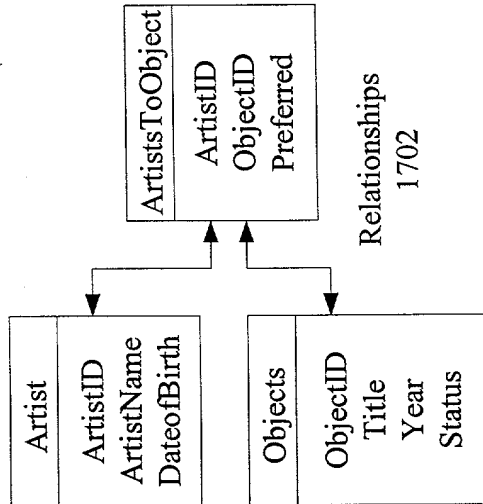
1638

1639

FieldID	Grouping	Display Name	Value	ObjectID
1	1	Title	Kleine Welten VII	1
2	1	Year	1922	1
3	1	Status	Restricted Use	1
4	1	Project	Karrer, Anthony	1
4	2	Project	Mullen, Margaret	1
5	1	Project	Residence for Eugene	1
6	1	Artist Name	Kandinsky, Vasily	1
6	2	Artist Name	Delacroix, Eugène	1
7	1	Year Of Birth	1866	1
7	2	Year Of Birth	1798	1

Value Table  
1630

FIG. 16



Artist (400)

ArtistID	ArtistName	DateOfBirth
1	Kandinsky, Vasily	1922
2	Delacroix, Eugene	1923

ArtistToObject (410)

ArtistID	ObjectID	Preferred
1	1	1
1	2	1
2	1	0

Source Tables  
1700

Intermediate Mapping Tables  
1710

Tables (710)

TableID	CollectionID	TableName	Hierarchy	ParentChild
1	1	Objects	0	0
2	1	Artists	0	0
3	1	ArtistToObjct	0	0

Joins (900)

JoinID	StartTable	StartFieldName	EndTable
1	Artist	ArtistID	ArtistToObject
2	ArtistToObjc	ArtistToObject	Objects

Joins (900) contd...

EndFieldName	NextJoin
ArtistID	2
ObjectID	0

Fields (800)

FieldID	DisplayName	FieldName	FieldType
6	ArtistName	ArtistName	String
7	DateofBirth	DateofBirth	Number

Fields (800) contd...

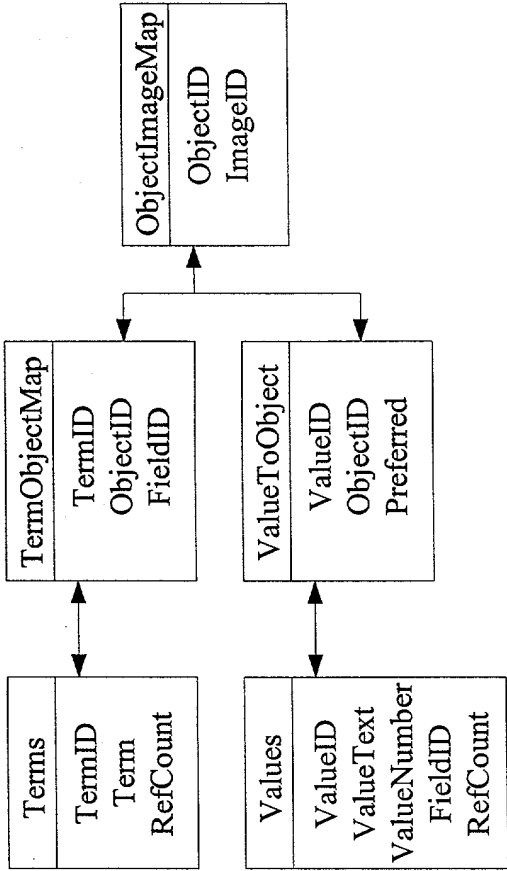
Table	NextJoin
Artists	1
Artists	1

Results of Constructed SQL Query (1712)

ArtistName	YearofBirth	ObjectID
Kandinsky, Vasily	1866	1
Delacroix, Eugene	1798	1
Kandinsky, Vasily	1866	2

FIG. 17A

FIG. 17B



Relationships  
1722

Terms (1300)

TermID	Term	RefCount
1	Kandinsky	2
2	Vasily	2
3	Delacroix	1
4	Eugene	1
5	1866	1
6	1798	1

TermObjectMap (1310)

TermID	ObjectID	FieldID
1	1	6
2	1	6
3	1	6
4	1	6
1	2	6
2	2	6

Values (1420, 1430)

ValueID	ValueText	ValueNumber	FieldID	RefCount	Enabled
1	Kandinsky, Vasily	1866	6	2	1
2			7	2	1
3	Delacroix, Eugene	1798	6	1	1
4			7	1	1

ValueToObject (1410)

ValueID	ObjectID	Preferred
1	1	1
2	1	1
3	1	0
4	1	0
1	2	1
2	2	1